

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. **(Currently amended)** A method of producing a polyamide nanocomposite from a partially crystalline polyamide and organically modified layered silicates in a double screw extruder having an intake,

wherein the method comprises the following steps:

(a) a first part of the polyamides is dosed as a granulate into the extruder intake and melted,

(b) the organically modified layered silicate is dosed into the melt of the first part of the polyamide and admixed therewith, in a mixture ratio in the range of 60 to 80 wt.% of polyamide and 40 to 20 wt.% of layered silicates,

(c) a second part of the polyamide is added to the melt mixture in the double screw extruder to set the final concentration of the organically modified layered silicate at no greater than 10 % in the melt of the polyamide nanocomposite, and

(d) the resulting melt is subjected to filtration, and said steps are carried out in a single extrusion procedure.

2. **(Original)** The method according to Claim 1,

characterized in that the filtration of the melt is performed directly before the extruder nozzle.

3. (Cancelled)

4. (Previously presented) The method according to Claim 1,

characterized in that wire filters having a mesh width of at most 200 μm are used to perform the melt filtration.

5. (Previously presented) The method according to Claim 4,

characterized in that wire filters having a mesh width between 50 μm and 100 μm are used to perform the melt filtration.

6. (Previously presented) The method according to Claim 1,

characterized in that, with the addition of the organically modified layered silicate, a mixture ratio of 70 weight-percent of polyamides and 30 weight-percent of layered silicates is produced and the second part of the polyamides is added to the mixture in the quantity necessary in order to achieve the final concentration of 2.5 to 6 weight-percent of the layered silicates in the melt of the polyamide nanocomposite.

7. **(Previously presented)** The method according to Claim 1,

characterized in that the layered silicates are organically modified using phosphonium salts of the formula $P-R_4-X$, R_4 representing three alkyl or aryl residues and X being a Cl, Br, or I.

8. **(Previously presented)** The method according to Claim 1,

characterized in that the organically modified layered silicates are exfoliated and have an ultrafine grain having an average particle size in at least one dimension of at most 100 nm.

9. **(Previously presented)** The method according to Claim 1,

characterized in that the polyamides are selected from the group consisting of homopolyamides PA 6, PA 66, PA 46, PA 11 and PA 12.

10. **(Previously presented)** The method according to Claim 1,

characterized in that the partially crystalline polyamides are admixed with a component of amorphous polyamide.

11. (Previously presented) The method according to Claim 1,

characterized in that the organically modified layered silicates include phyllosilicates of the three-layer type (2:1).

12. (Withdrawn) An injection-molded part, which is produced using a polyamide nanocomposite obtained according to the method according to Claim 1,

characterized in that it has a surface which has an average roughness value (R_a) of less than 0.05 μm and/or has an average roughness depth (R_z) of less than 4 μm .

13. (Withdrawn) The injection-molded part according to Claim 12,

characterized in that it includes a smooth surface having a high gloss produced by a molding tool polished to a high gloss.

14. (Withdrawn) A reflector for vehicle driving illuminators,

characterized in that it includes an injection molded part according to Claim 12 and is metallized directly.

15. (Withdrawn) A reflector for signal or street lights and/or a sub-reflector for vehicle driving illuminators, characterized in that it includes an injection molded part according to Claim 12 and is metallized directly.

16. (Withdrawn) The reflector according to Claim 14, characterized in that the metal coating is applied through PVD methods.

17. (Previously presented) A method of using a polyamide nanocomposite molding compound produced according to Claim 1, comprising injection molding said molding compound into a reflector for vehicle driving illuminators.

18. (Previously presented) A method of using a polyamide nanocomposite molding compound produced according to Claim 1, comprising injection molding said molding compound into a reflector for signal or street lights or into a sub-reflector for vehicle driving illuminators.

19. (Previously presented) The method of Claim 17,

Appln. No. 10/526,766
Amd. dated June 4, 2009
Reply to Office Action of March 5, 2009

characterized in that a gas injection molding technique is used during injection molding.

20. (Withdrawn) The reflector according to Claim 15, characterized in that the metal coating is applied through PVD methods.